

California Regional Water Quality Control Board
Santa Ana Region

IN THE MATTER OF:

Eastern Municipal Water District
2270 Trumble Road
Post Office Box 8300
Perris, CA 92572-8300

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COMPLAINT NO. 98-106

for

Administrative Civil Liability

YOU ARE HEREBY GIVEN NOTICE THAT:

1. Eastern Municipal Water District (EMWD) is alleged to have violated provisions of law for which the California Regional Water Quality Control Board, Santa Ana Region (Board), may impose liability pursuant to California Water Code (Water Code) Section 13385.
2. A hearing concerning this complaint will be held before the Board within 60 days of the date of issuance of this complaint, unless EMWD waives its right to a hearing. Waiver procedures are specified on page 6 of this complaint. If the hearing in this matter is not waived, the hearing will be held during the Board's regular meeting on January 15, 1999, at the City of Corona Council Chambers, 815 West Sixth Street, Corona, California. The meeting begins at 9:00 a.m. EMWD or its representatives will have an opportunity to appear and be heard and to contest the allegations in this complaint and the imposition of civil liability by the Board. An agenda and announcement for the meeting will be mailed to you not less than 10 days prior to the hearing date.
3. If the January 15, 1999 hearing is held, the Board will consider whether to affirm, reject, or modify the proposed administrative civil liability or whether to refer this matter to the Attorney General for recovery of judicial civil liability.
4. Discharges from EMWD's wastewater treatment plants to Temescal Creek are currently regulated under Order No. 93-33 (NPDES No. CA 8000188), waste discharge requirements adopted by the Board on July 16, 1993.
5. EMWD is alleged to have violated Discharge Specification A.4. of Order No. 93-33. This specification states:

"The total chlorine residual in the effluent shall not be greater than 0.1 mg/l at any time."

6. This complaint is based on the following facts:

- A) EMWD operates five municipal water reclamation facilities (wastewater treatment plants), which are named after the communities they serve: Hemet-San Jacinto, Moreno Valley, Perris Valley, Temecula Valley, and Sun City. These five water reclamation facilities are part of a reclaimed water system, also operated by EMWD, that includes transfer and distribution pipelines, pumping stations, reservoirs, and an outfall pipeline to allow discharge of surplus reclaimed water. Order No. 93-33 establishes waste discharge requirements for the discharge of surplus tertiary treated wastewater from EMWD's reclaimed water system to Temescal Creek.
- B) Order No. 93-33 includes a total chlorine residual limitation to protect the warm freshwater habitat beneficial use (WARM) of Temescal Creek (and of Reach 2 and Reach 3 of the Santa Ana River, to which Temescal Creek is tributary).
- C) EMWD's Temescal Creek outfall, a 9-mile pipeline from the District's Sun City Regional water reclamation plant, was completed in early 1998. The outfall pipeline was used for the first time during March and April 1998, when a total of 58 million gallons was discharged through it.
- D) EMWD intended to shut the outfall pipeline following the March–April 1998 discharge, and to leave it charged with chlorinated effluent to minimize algae growth. The pipeline is not expected to be used until next winter, at the earliest, and it may be several years before the line is used again. In May 1998, EMWD began planning an operation to charge the outfall pipeline with tertiary-treated, highly chlorinated (10-15 mg/l) effluent from its Perris Valley Regional plant, using its Reach 4 (Sun City) reclaimed water pump station
- E) EMWD staff developed a written procedure for charging the line, using a “simple plug flow” model to estimate when the discharge of chlorinated effluent would pass through the line and arrive at the discharge point. The procedure called for the outfall pipeline to be shut at this time to prevent the discharge of chlorinated effluent in excess of Discharge Specification, A.4. of Order No. 93-33. EMWD staff calculated that the highly chlorinated effluent would take 23 hours 35 minutes to move through the pipeline at specified operating conditions (4,000 gallons per minute (gpm) at 45 pounds per square inch (psi), at the pump station). EMWD provided the engineering calculations used to determine this flow rate and system pressure. These conditions were specified to ensure that the pipeline was pressurized, and pipe-full, during the operation, to meet the criteria for plug flow. EMWD's written procedure also called for EMWD to have the capability to

dechlorinate the effluent at the site of the outfall to Temescal Creek. This procedure was employed for the first time, beginning July 16, 1998.

- F) On July 16, 1998, at 9:20 a.m., EMWD staff began pumping highly chlorinated effluent into the outfall pipeline at 4,000 gpm. The pumping rate stabilized at 3,500 gpm and 37 psi. At this flow and pressure, EMWD staff predicted that it would take 26 hours for the first of the chlorinated effluent to pass through the pipeline and to arrive at the outfall to Temescal Creek. The arrival time predicted was about 11:00 a.m. on July 17, 1998.
- G) On July 16, 1998, at 10 p.m., the chlorine residual of the outfall's discharge to Temescal Creek was found to be 0.02 mg/l.
- H) On July 17, 1998, at approximately 6:00 a.m., EMWD staff measured a chlorine residual of 1.4 mg/l in the discharge point to Temescal Creek, and it was immediately clear to EMWD staff that the first of the chlorinated effluent had already reached the discharge point. EMWD staff acted quickly to cease the discharge by securing the outfall pipeline, and, to the extent possible, contained effluent that had been discharged.
- I) EMWD had obtained equipment to dechlorinate the discharge as specified in its written procedure. Because of vandalism concerns, EMWD staff deviated from the written procedure of having the equipment at the outfall throughout the discharge to transporting the equipment to the outfall a few hours before the chlorinated effluent was expected. At approximately 7:30 a.m., EMWD staff implemented emergency dechlorination of approximately 50,000 gallons of chlorinated effluent that had been discharged and contained.
- J) On July 17, 1998, at approximately 1:30 p.m., EMWD staff reported the incident to Board staff.
- K) On the afternoon of July 17, 1998, Board staff inspected the site of the discharge and downstream reaches of Temescal Creek, and observed no adverse affects of the discharge on the aquatic habitat downstream of the discharge. EMWD staff present at this inspection tested the contained and dechlorinated effluent, and Temescal Creek, for chlorine residual and found essentially none.
- L) In its July 23, 1998, written report of the incident to Board staff, EMWD staff attributed this violation to "short circuiting" in the outfall pipeline. In its July 23, 1998, and August 3, 1998 reports of the incident, EMWD indicated that the operating conditions specified in the written procedure for the pipeline shutdown operation were not met during the actual operation.

- M) After discussing this violation with EMWD staff, Board staff conducted an engineering analysis of the pipeline flow conditions that prevailed during the test, using a recognized “non-ideal flow model” that was calibrated with operating and field data provided by EMWD. This analysis indicated that effluent with a chlorine residual concentration greater than the 0.1 mg/l limit specified by Order No. 93-33 arrived at the outfall as much as 10 hours earlier than predicted by EMWD’s “plug flow model”, or at least 5 hours before EMWD staff became aware of the violation.
7. Board staff believes that EMWD’s May 8, 1998 written procedure for this operation was seriously flawed, because it relied upon an engineering analysis that was inadequate to conservatively predict the outcome of the operation. Reliance upon an overly simplified predictive model directly led to the violation cited herein. Furthermore, Board staff believes that EMWD failed to exercise appropriate precautions to prevent violations of Order No. 93-33, by conducting a potentially high-risk, first-time operation, without planning for or conducting frequent monitoring throughout the operation’s duration.
8. Pursuant to Water Code Section 13385, those who violate waste discharge requirements are liable civilly. As provided by Water Code Section 13385 (c), the Board can administratively assess a civil liability in an amount not to exceed the sum of both of the following:
- A) Ten thousand dollars (\$10,000) for each day in which the violation occurs; and,
- B) Where there is a discharge, any portion of which is not susceptible to clean up or is not cleaned up, and the volume discharged but not cleaned up exceeds 1,000 gallons, an additional liability not to exceed ten dollars (\$10) times the number of gallons by which the volume discharged but not cleaned up exceeds 1,000 gallons.
9. In accordance with Water Code Section 13385 (c), the maximum liability for the violation cited is \$10,000,000. This liability is calculated in the following manner:
- A) \$10,000, for 1 day of discharge in violation of Order No. 93-33; and
- B) \$9,990,000, at \$10 per gallon for each gallon over 1,000 gallons discharged in violation of Order No. 93-33 not susceptible to clean up, calculated as follows:
- (5 hours, i.e., 300 minutes x 3500 gpm) = 1,050,000 gallons discharged, of which, 50,000 gallons of discharged waste water were contained and dechlorinated,
($\$10/\text{gallon} \times (1,050,000 \text{ gallons} - 50,000 \text{ gallons} - 1,000 \text{ gallons}) = \$9,990,000$

- C) The sum of \$10,000 (from 9.A, above) and \$9,990,000 (from 9.B, above) is \$10,000,000.
10. Following the discovery that the chlorine residual limitation had been violated, EMWD staff acted quickly and appropriately to halt the discharge and dechlorinate the affected area. During the site inspection on July 17, 1998, eight hours after the discharge was terminated, Board staff did not observe adverse effects of the discharge on the habitat of Temescal Creek downstream from the discharge point.
 11. EMWD staff has taken action to prevent future violations of this type. EMWD has stated that in the future, it will employ continuous monitoring from the time the outfall discharge valve is open until the discharge is terminated. In addition, a portable dechlorination unit will be on site and operational from the time valves are turned that release undechlorinated water.
 12. Water Code Section 13385 (e) specifies factors that the Board shall consider in establishing the amount of civil liability. After consideration of these factors, the Executive Officer finds that civil liability should be imposed on EMWD by the Board in the amount of \$10,000 for the violation cited above.
 13. EMWD has proposed a supplemental environmental project (SEP) to redress this violation: a study to assess nitrogen and phosphorus loadings from confined animal feeding operations (CAFO) to the San Jacinto River and Lake Elsinore. The proposed study is to be completed by May 1, 1999. Nitrogen and phosphorus loadings in this watershed and the impacts of confined animal facilities, are a major concern of the Regional Board and the local communities because of eutrophication and resultant adverse impacts to the beneficial uses of these surface waters.
 14. The Executive Officer proposes that \$8,000 of assessment proposed in Item 12, above, be suspended, contingent upon EMWD's timely completion of the proposed CAFO nitrogen and phosphorus loadings study in a manner acceptable to the Executive Officer.

(Remainder of this page is intentionally blank.)

15. EMWD may waive its right to a hearing. If EMWD waives its right to a hearing, please sign the waiver form that is Page 7 of this complaint, and submit it, with a cashier's check made payable to the State Water Resources Control Board in the amount of \$2,000, to:

Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501-3339

16. If the SEP identified in paragraph 13, above, is not completed by May 1, 1999 to the satisfaction of the Executive Officer, \$8,000 shall become immediately due and payable.

If you have any question regarding this complaint, please contact me at (909) 782-3284, Mark Adelson at (909) 782-3234, or Jane Qiu at (909) 782-4992, or the Board's staff counsel, Ted Cobb, at (916) 657-0406.

Date

Gerard J. Thibeault
Executive Officer

California Regional Water Quality Control Board
Santa Ana Region

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WAIVER OF HEARING

Eastern Municipal Water District (EMWD) agrees to waive its right to a hearing before the Santa Ana Regional Water Quality Control Board with regard to the violations alleged in Complaint No. 98-106. EMWD has enclosed a cashier's check as described in Paragraph 15 of Complaint No. 98-106. EMWD understands that it is giving up its right to be heard and to argue against allegations made by the Executive Officer in Complaint No. 98-106, and against the imposition of, and amount of, the civil liability.

Date _____

for Eastern Municipal Water District